

Series D valve islands, Size 1, Multipole and Fieldbus

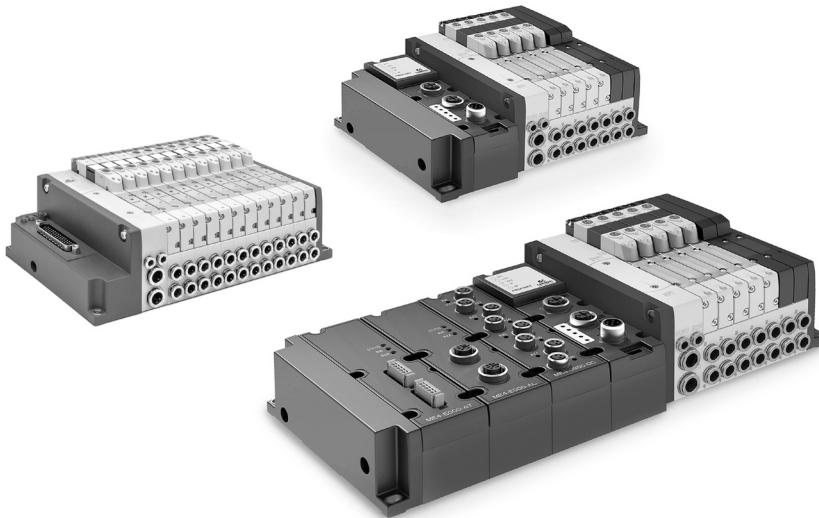
New

Fieldbus connection with the most common communication protocols

PROFIBUS-DP, PROFINET, CANopen, EtherNET/IP, EtherCAT and IO-Link

Multipole connection with 25 or 44 pins

Valve functions: 2x3/2; 5/2; 5/3 CC; CO; CP



Thanks to the large range of options available, the Series D valve island represent an excellent solution for all those applications that require pneumatic and electrical functions in restricted spaces.

The different electrical connection possibilities allow to create Islands with a high number of valve positions and different pressure zones. Moreover, the fieldbus version can manage both digital and analog electric input and output signals.

- » Valve size 10,5 mm
- » Compact design
- » Individual modular subbases in technopolymer
- » Highly expandable electrically and pneumatically
- » Flexibility in connecting and exchanging I/O modules
- » COILVISION technology to monitor performance parameters
- » Same subbase for monostable and bistable valves
- » Possibility to transmit operational data through WLAN
- » Blinking LEDs indicating different types of operating faults

Small dimensions, high flows, subbases with individual pneumatic and electric modules, an easy subbase connection system, constant diagnosis and monitoring of performance parameters make this series a particularly innovative product.

One of the features of this series is the monitoring function regarding the correct operating of the solenoid valve.

The electronics installed both in the subbase and in the Sub-D and multi-serial connection module, enables to constantly monitor the efficiency of the driving coil of the solenoid valve.

Possible variations with respect to the ideal operating conditions, for example a higher power consumption, variation in response times and an increased temperature are indicated through different ways of blinking by the LED on the solenoid valve and by an electric alert signal that is sent to the PLC through the Sub-D module connecting cable or, in case of the multi-serial connection module, directly through the communication protocol.

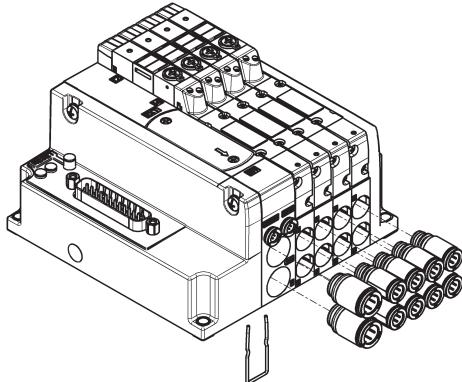
Manual, instruction sheet and configurator are available on the site <http://catalogue.camozi.com> or by means of the QR code on the product's label.

GENERAL DATA

PNEUMATIC SECTION	
Valve construction	spool with seals
Valve functions	5/2 monostable and bistable 5/3 CC; CO; CP 2 x 3/2 NC 2 x 3/2 NO 1 x 3/2 NC + 1 x 3/2 NO
Materials	spool: AL spool seals: HNBR other seals: NBR body: AL end caps: polymer subbase size 1: polymer
Connections	outlet 2 and 4, size 10,5 mm: tube Ø 4, tube Ø 6 supply 1: tube Ø 8 supply 12/14: tube Ø 4 exhaust 3 and 5: tube Ø 8 exhaust 82/84: tube Ø 4
Temperature	0 ÷ 50°C
Air characteristics	compressed, filtered and non-lubricated air in class 7.4.4 according to ISO 8573-1:2010. In case lubrication should be necessary, only use oils with a maximum viscosity of 32 Cst and the version with external servo-pilot supply. The air quality of the servo-pilot supply must be of class 7.4.4 according to ISO 8573-1:2010 (do not lubricate).
Valve sizes	1 = 10.5 mm
Operating pressure	-0,9 ÷ 10 bar
Pilot pressure	2,5 ÷ 7 bar 4,5 ÷ 7 bar (with operating pressure exceeding 6 bar for the version 2x3/2)
Flow rate	250 NL/min
Mounting position	any position
Protection class	IP 65
ELECTRICAL SECTION	
MULTIPOLE VERSION	
Type of Sub-D connector	25 or 44 pins
Max. absorption	0.8 A (with Sub-D connector 25 pins) 1 A (with Sub-D connector 44 pins)
Supply voltage	24 V DC +/- 10%
Max. number of coils to operate	22 on 11 valve positions (with Sub-D connector 25 pins) 38 on 19 valve positions (with Sub-D connector 44 pins)
Signalling LED	Multipole: green LED - presence of power red LED - anomaly Valve: yellow LED - presence of power blinking yellow LED - operating fault
ELECTRICAL SECTION	
FIELDBUS VERSION	
General data	see Multi-serial Modules section on the next pages
Max. absorption	2.5 A
Supply voltage	24 V DC +/-10% logic supply 24 V DC +/-10% power supply
Max. number of coils to operate	128 on 64 valve positions
Max. number of digital inputs	128
Max. number of analog inputs	16
Max. number of digital outputs	128
Max. number of analog outputs	16
More information can be found at http://catalogue.camozi.com Series D "Instructions for use and maintenance"	

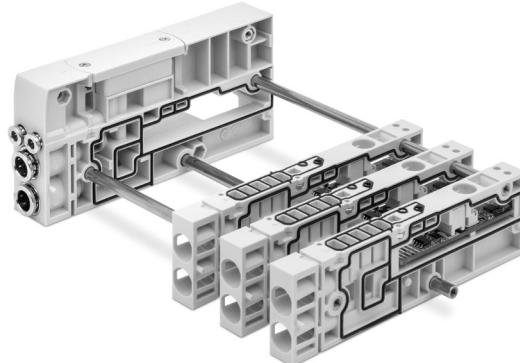
PNEUMATIC CONNECTION

The subbases, in their different configurations, include tube connection cartridges. Through the removal of fixing clips it is possible to replace these cartridges and adapt them to the necessary dimension. The pneumatic part is the same for both the Multipole and Serial version. The tie rods with different fixed lengths that unite the subbases, can be extended individually through additional tie rods for odd positions.



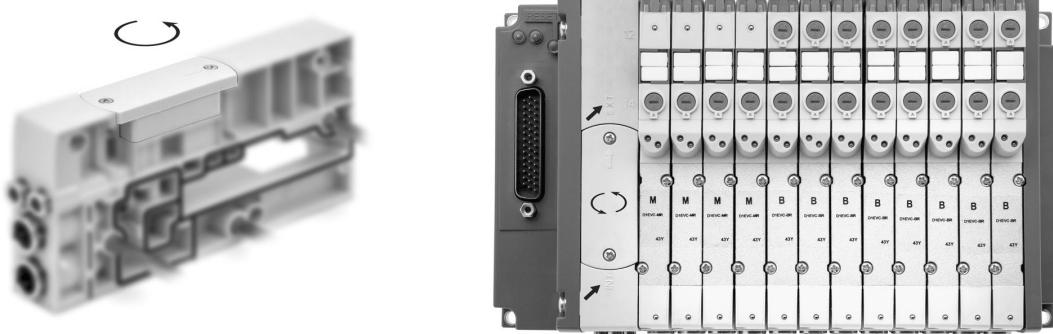
INTERMEDIATE SUBBASES

Intermediate subbases with a diaphragm or additional supply function allow to create diversified pressure and/or exhaust zones, add an incoming air flow and increase the exhaust flow. Furthermore there are subbases available that, besides the aforementioned functions, can interrupt the pneumatic actuation to the coils. This prevents, independently of the electric signal being present or not, to actuate the monostable and bistable valves. The intermediate subbases do not need to be calculated in the number of valve positions.



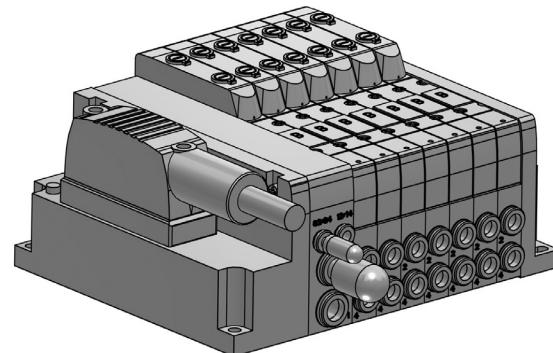
SERVOPILOT

The initial supply and exhaust base can be changed through rotating the upper device of the selected type of servo-pilot. The change from internal to external servo-pilot is obtained without replacing the initial base, this allows for example to include or section the island, adapting its operation also after its installation, for example with valves that operate with vacuum or reduced pressures. The arrow indicates the selected type of servo-pilot.



CONFIGURATOR

The island configuration is of minimum three positions including the possible base for additional supply and/or exhaust. The maximum number of positions depends on the selected type of electrical connection. To correctly compose the commercial code and to download drawings, please use the configurator present at <http://catalogue.camozi.com> in the sections "Configurators" or "Camozi Partcommunity".



MULTIPOLE VERSION

The multipole version can be connected quickly and safely through the connecting cable with angled outlet of 25 or 44 pins to the electric Sub-D connector integrated in the island. The single modularity of the subbases allows to create islands with up to a maximum of 11 or 19 valve positions according to the type of connecting cable used.



FIELDBUS VERSION

The new CX4 fieldbus module integrated in the Series D valve island enables to interface with the most common fieldbus protocols. Besides managing the pneumatic part (the same as the Multipole version) different kinds of electric modules can be managed. With this configuration it is possible to enlarge the pneumatic part up to a maximum of 64 valve positions with double command and the electric part up to 128 digital inputs and 128 digital outputs, besides 16 analog inputs and 16 analog outputs. Besides the standard voltage and current versions, the analog modules are also available in 2-channel Bridge, RTD and TC versions.

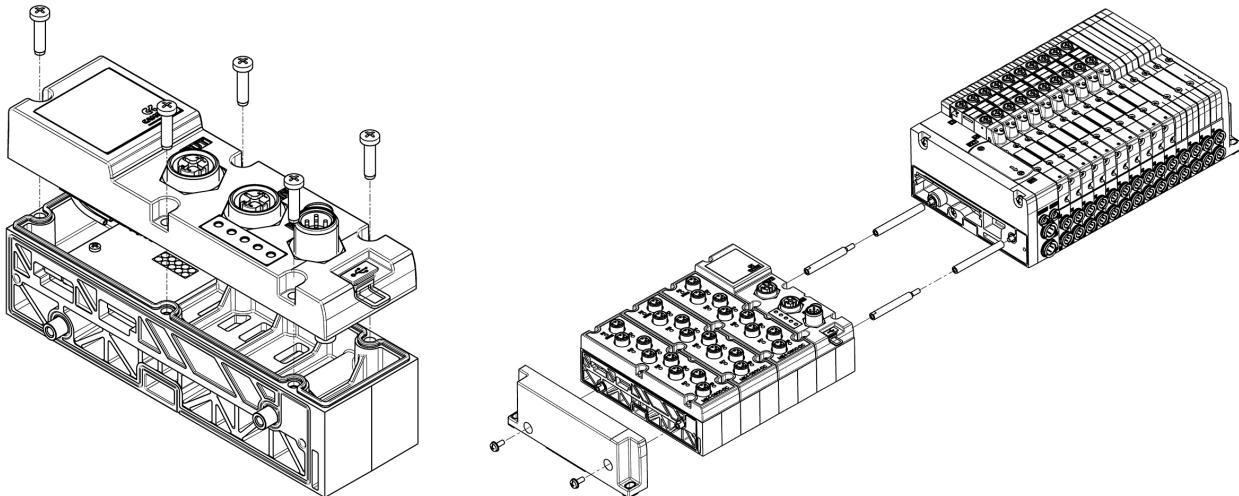


ELECTRICAL MODULE

The electric modules are composed of two parts: the base to connect the different modules, which is the same for all types, and different covers on which the connectors are positioned.

This solution enables to easily change the connection points with the sensors or functions of the machine.

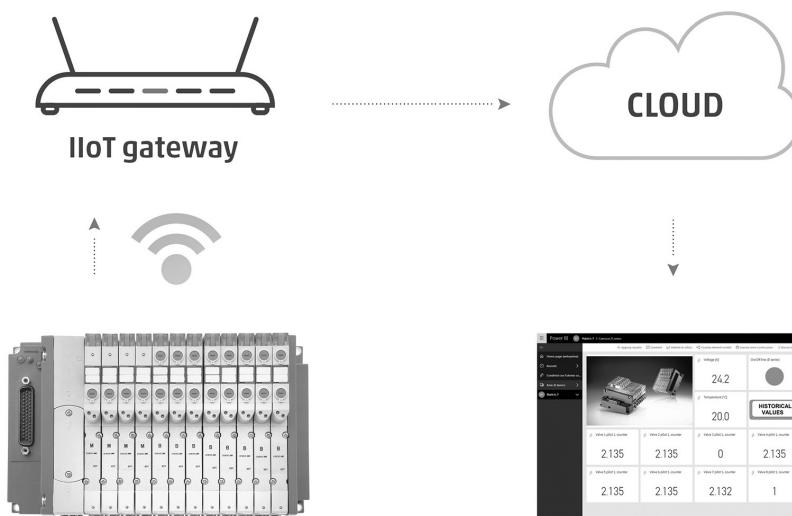
Also the electric modules, like the subbases in the pneumatic part, can be added or removed thanks to the modular connection system.



COILVISION

This is a standard function in all our valve islands with Multipole and Serial connection. Its purpose is to monitor the proper function of each solenoid valve individually, particularly the solenoid. The electronics installed in the subbase allows to constantly monitor the efficiency of the driving coil of the solenoid valve. Possible variations with respect to the ideal operating conditions, like for example a higher power consumption, different response times or an increased temperature, are reported by means of a blinking yellow LED of the interested solenoid. Besides the blinking of this LED, also a general red LED blinks located on the Sub-D module.

These indications are combined with an alert message sent to the PLC. By selecting code W from the "Interface" menu of the encryption code, besides the described signals, it is possible to gather all operational data of the islands and send them through WLAN to the corporate net or onto the Cloud to be analysed.

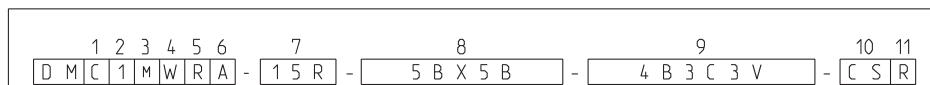
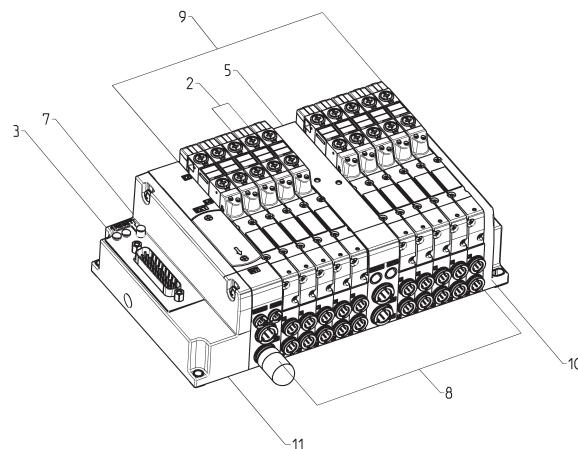


CODING EXAMPLE - MULTIPOLE VERSION

DM | C | 1 | M | W | R | A - 15R - 4AQH4AX4B - 3M2L3M2B2C - CS | R

DM	MODULAR ISLAND
C	VALVE C = VC Model
1	SIZE 1 = 10,5 mm
M	ELECTRICAL CONNECTION M = Multipole 25 pin PNP Q = Multipole 44 pin PNP
W	INTERFACE O = without interface W = WLAN
R	MANUAL OVERRIDE P = push button R = with push and turn device
A	SERVO-PILOT SUPPLY A = internal B = external
15R	CONNECTOR 0 = without connector CONNECTOR R WITH CABLE 03R = 3 mt 05R = 5 mt 10R = 10 mt 15R = 15 mt 20R = 20 mt 25R = 25 mt
4AQH4AX4B	<p>SUBBASES DIAPHRAGM A = cartridges tube Ø4 B = cartridges tube Ø6</p> <p>SUBBASE* Q = diaphragm on channels 1, 3, 5 R = diaphragm on channel 1 S = diaphragm on channels 3 and 5</p> <p>WITH DIAPHRAGM AND EXTERNAL SERVO-PILOT SUPPLY* QT = diaphragm on channels 1, 3, 5; 12/14 external RT = diaphragm on channel 1; 12/14 external ST = diaphragm on channels 3, 5; 12/14 external</p> <p>WITH DIAPHRAGM AND INTEGRATED SILENCER* QH = diaphragm on channels 1, 3, 5 RH = diaphragm on channel 1 SH = diaphragm on channels 3, 5</p> <p>SUBBASE FOR ADDITIONAL FLOW* X = supply (1) and exhausts (3, 5) XH = supply (1) and exhausts (3, 5) with integrated silencer</p> <p>INTERFACE SUBBASE FOR ADDITIONAL FLOW WITH EXTERNAL SERVO-PILOT SUPPLY* XT = additional supply (1) and exhausts (3, 5)</p> <p>* = These subbases are already provided with cartridges for tube Ø8</p>
3M2L3M2B2C	VALVES M = 5/2 monostable B = 5/2 bistable C = 2X3/2 NC A = 2 X 3/2 NO G = 2 X 3/2 (NC+NO) V = 5/3 CC K = 5/3 CO N = 5/3 CP L = free position
CS	TERMINALS AND PLATES fittings on tube ports 1, 3, 5 C = cartridge Ø 8 CS = cartridge Ø 8 3,5 with silencers
R	FIXING TYPE = direct R = DIN rail

The choice made in the Terminal Plates section is also valid for the diaphragm and additional sub-bases

CODING MULTIPOLE VERSION

VALVE MODEL VC	(1)	SIZE	(2)	ELECTRICAL CONNECTION	(3)	INTERFACE	(4)	MANUAL OVERRIDE	(5)	SERVO-PILOT	(6)
DMC	1			M Q		O W		P R		A B	
CONNECTION (7)				SUBBASES DIAPHRAGM	(8)	VALVES	(9)	TERMINAL PLATES	(10)	MOUNTING	(11)
0				A		M		C		R	
03R				B		B		CS			
05R				SUBBASES		C					
10R				Q		A					
15R				R		G					
20R				S		V					
25R				WITH DIAPHRAGM AND EXTERNAL SERVO-PILOT SUPPLY		K					
				QT		N					
				RT		L					
				ST							
				WITH DIAPHRAGM AND INTEGRATED SILENCER							
				QH							
				RH							
				SH							
				SUBBASE FOR ADDITIONAL FLOW							
				X							
				XH							
				INTERFACE SUBBASE FOR ADDITIONAL FLOW WITH EXTERNAL SERVO-PILOT SUPPLY							
				XT							

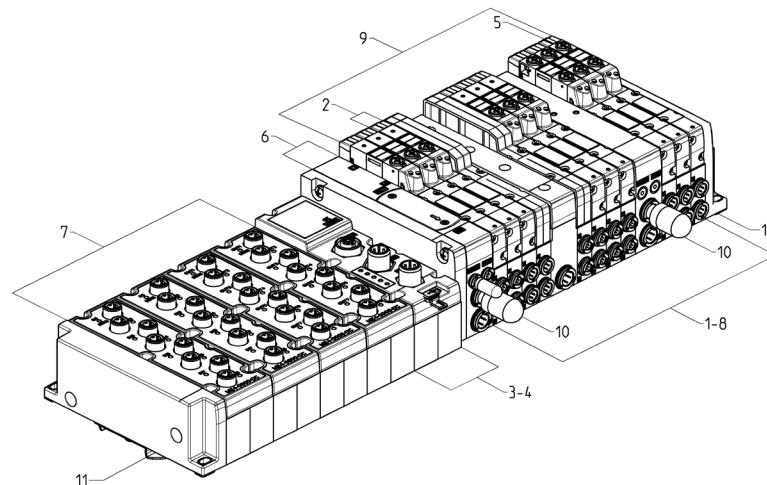
CODING EXAMPLE - FIELDBUS VERSION

DM | C | 1 | 01 | W | R | A - | 2A2Q | - | 2A2BQH4AX4B | - | 3M2L3M2B2C | - | CS | R

DM	MODULAR ISLAND
C	VALVE C = VC Model
1	SIZE: 1 = 10,5 mm
01	PROTOCOL 01 = PROFIBUS 03 = CANopen 04 = Ethernet/IP 05 = Ethercat 06 = PROFINET 07 = IO-LINK (cannot be configured with input and output modules)
W	INTERFACE 0 = without interface W = WLAN
R	MANUAL OVERRIDE P = push button R = with push and turn device
A	SERVO-PILOT SUPPLY A = internal B = external
2A2Q	INPUT AND OUTPUT MODULES 0 = without A = 8 Digital inputs M8 B = 16 Digital inputs, terminal block connection C = 2 Analog inputs (config. 0-10V, ±10V, 0-20mA, 4-20mA, ±20mA) M12 D = 2 Analog inputs (config. 0-10V, ±10V, 0-20mA, 4-20mA, ±20mA), terminal block E = 2 Inputs, BRIDGE M12 F = 2 Inputs, BRIDGE, TERMINAL BLOCK CONNECTION G = 2 Inputs, RTD M12 (PT100, PT200, PT500, PT1000) H = 2 Inputs, RTD TERMINAL BLOCK CONNECTION (PT100, PT200, PT500, PT1000) L = 2 Inputs, TC M12 (THERMOCOUPLES) M = 2 Inputs, TC TERMINAL BLOCK CONNECTION (THERMOCOUPLES) Q = 8 Digital outputs M8 R = 16 Digital outputs, terminal block connection
2A2BQH4AX4B	SUBBASES A = Cartridges tube Ø4 B = Cartridges tube Ø6 SUBBASE DIAPHRAGM*: Q = Diaphragm on channels 1, 3, 5 R = Diaphragm on channel 1 S = Diaphragm on channels 3 and 5 WITH DIAPHRAGM AND EXTERNAL SERVO-PILOT SUPPLY*: QT = Diaphragm on channels 1, 3, 5; 12/14 External RT = Diaphragm on channel 1; 12/14 External ST = Diaphragm on channels 3, 5; 12/14 External WITH DIAPHRAGM AND INTEGRATED SILENCER*: QH = Diaphragm on channels 1, 3, 5 RH = Diaphragm on channel 1 SH = Diaphragm on channels 3, 5 SUBBASE FOR ADDITIONAL FLOW*: X = Supply (1) and exhausts (3, 5) XH = Supply (1) and exhausts (3, 5) with integrated silencer INTERFACE SUBBASE FOR ADDITIONAL FLOW WITH EXTERNAL SERVO-PILOT SUPPLY*: XT = Additional supply (1) and exhausts (3, 5) * = These subbases are already provided with cartridges for tube Ø8
3M2L3M2B2C	VALVES M = 5/2 Monostable B = 5/2 Bistable C = 2 X 3/2 NC A = 2 X 3/2 NO G = 2 X 3/2 (NC+NO) V = 5/3 CC K = 5/3 CO N = 5/3 CP L = Free position
CS	TERMINAL PLATES Fittings on tube ports 1, 3, 5 C = Cartridge tube Ø 8 CS = Cartridge tube Ø 8 3,5 with silencer
R	FIXING TYPE = direct R = DIN rail

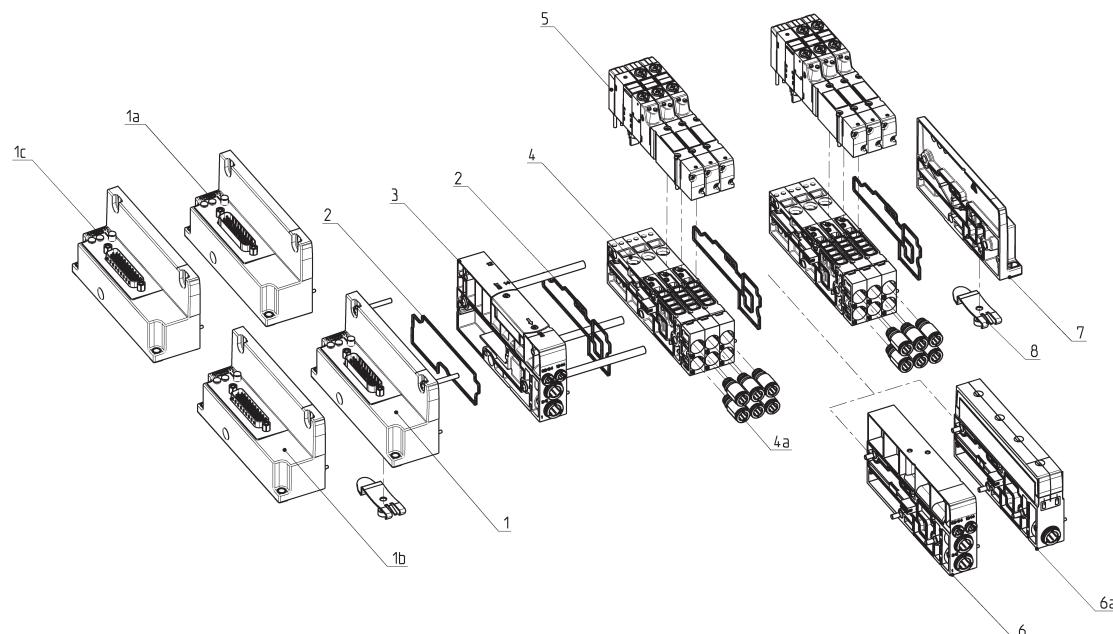
The choice made in the Terminal Plates section is also valid for the diaphragm and additional sub-bases

FIELDBUS VERSION CODING



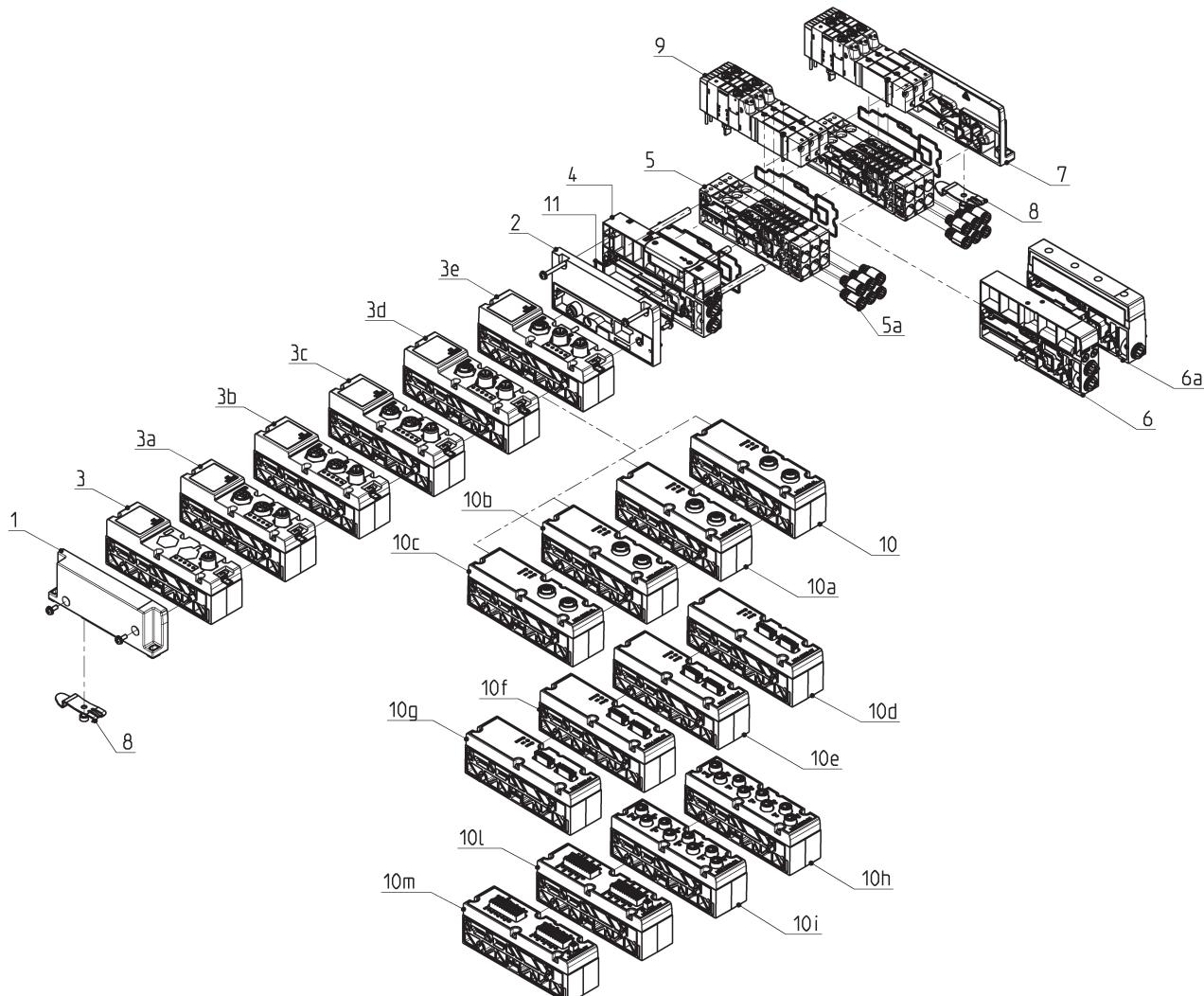
1	2	3	4	5	6	7	8	9	10	11
D	M	C	1	01	W	R	A	2A2Q	2A2BQH4AX4B	3M2L3M2B2C

(1) VALVES	(2) SIZE	(3) PROTOCOL	(4) INTERFACE	(5) MANUAL OVERRIDE	(6) SERVO-PILOT
VC	1	01	0	P	A
		03	W	R	B
		04			
		05			
		06			
		07			
(7) INPUT AND OUTPUT MODULES	(8) SUBBASES	(9) VALVES	(10) TERMINAL PLATES	(11) FIXING	
A	A	M	C	R	
B	B	B	CS		
C	SUBBASE WITH DIAPHRAGM	C			
D	Q	A			
E	R	G			
F	S	V			
G	SUBBASE WITH DIAPHRAGM AND EXTERNAL SERVO-PILOT SUPPLY	K			
H	QT	N			
L	RT	L			
M	ST				
Q	SUBBASE WITH DIAPHRAGM AND SILENCER				
R	QH				
	RH				
	SH				
	SUBBASE FOR ADDITIONAL FLOW				
	X				
	XH				
	INTERFACE SUBBASE FOR ADDITIONAL FLOW WITH EXTERNAL SERVO-PILOT SUPPLY				
	XT				

MULTIPOLE version COMPONENTS**COMPONENTS**

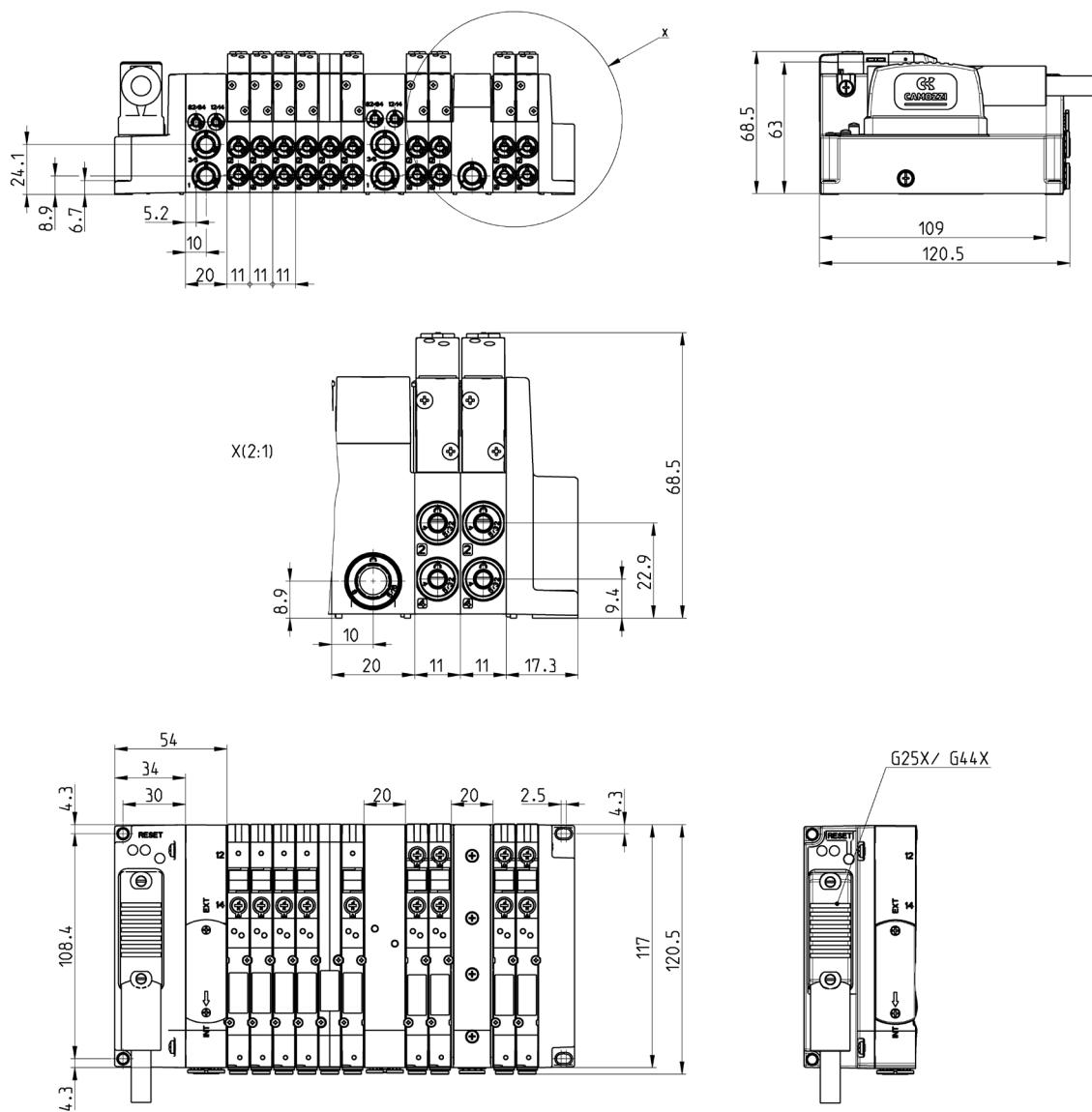
1	Electric interface group - multipole 25 pins
1a	Electric interface group - multipole 25 pins WLAN interface
1b	Electric interface group - multipole 44 pins
1c	Electric interface group - multipole 44 pins WLAN interface
2	Interface seals
3	Initial pneumatic supply module
4	Modular subbase size 1
4a	Interchangeable quick-release couplings
5	Solenoid valve size 1
6	Additional module to convey supply and exhaust channels
6a	Module to supply and to silence the exhaust channel
7	Terminal plate
8	Mounting bracket for DIN rail

FIELDBUS version COMPONENTS

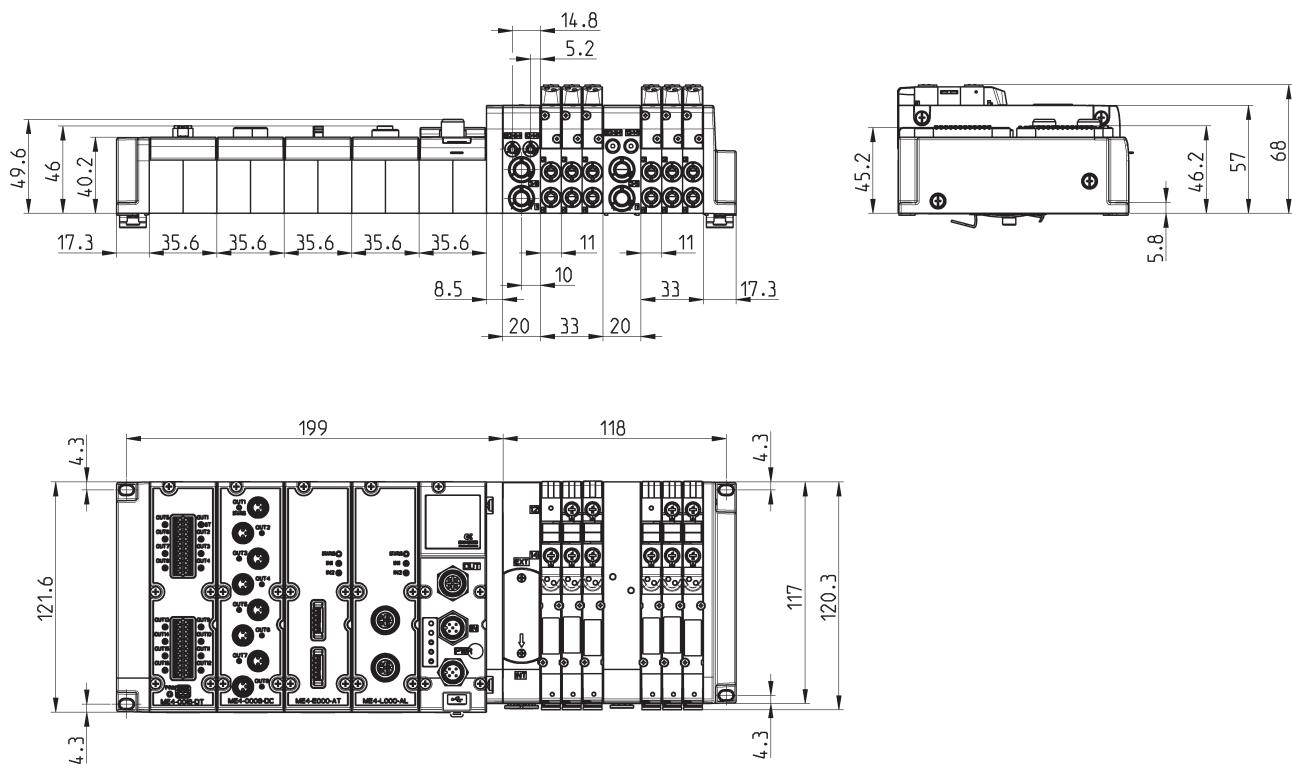


COMPONENTS

1	Terminal module	8	Mounting bracket for DIN rail
2	Fieldbus module interface	9	Solenoid valve size 1
3	IO-Link module	10	2 Analog voltage/current Inputs, M12
3a	PROFINET module	10a	2 Analog load cell Inputs, M12
3b	EtherCAT module	10b	2 Analog thermocouple Inputs, M12
3c	EtherNet/IP module	10c	2 Analog RTD Inputs, M12
3d	CANopen	10d	2 Analog voltage/current Inputs, terminal block
3e	PROFIBUS module	10e	2 Analog load cells Inputs, terminal block
4	Initial pneumatic supply module	10f	2 Analog thermocouple Inputs, terminal block
5	Modular subbase size 1	10g	2 Analog RTD Inputs, terminal block
5a	Interchangeable quick-release couplings	10h	8 Digital Inputs
6	Additional module to convey supply and exhaust channels	10i	8 Digital Outputs
6a	Module to supply and to silence the exhaust channel	10l	16 Digital Inputs
7	Terminal plate	10m	16 Digital Outputs

MULTIPOLE version 25 and 44 pin DIMENSIONS


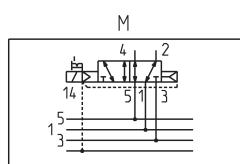
FIELDBUS version DIMENSIONS



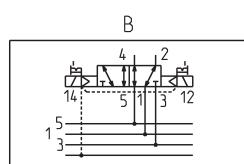
CODING EXAMPLE

D	1	E	VC	-	M	P
D	SERIES					
1	SIZE: 1 = 10,5 mm					
E	VERSION: E = solenoid valve					
VC	COMPONENT: VC = plugin valve					
M	TYPE OF SOLENOID VALVE M = 5/2 monostable B = 5/2 bistable C = 2 x 3/2 NC A = 2 x 3/2 NO G = 2 x 3/2 (NC+NO) V = 5/3 CC K = 5/3 CO N = 5/3 CP					
P	MANUAL OVERRIDE: P = push button R = with push and turn device					

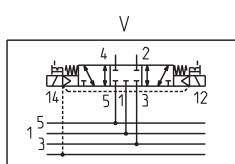
AVAILABLE FUNCTION - SYMBOLS FOR SOLENOID VALVES



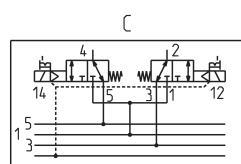
M = 5/2, Monostable



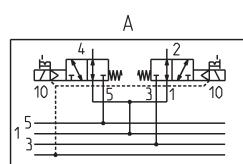
B = 5/2, Bistable



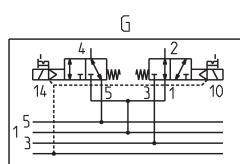
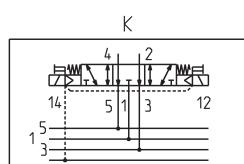
V = 5/3 Centres Closed



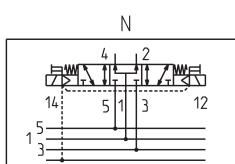
C = 2 x 3/2 NC



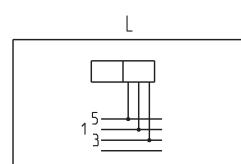
A = 2 x 3/2 NO

G = 1 x 3/2 NC +
1 x 3/2 NO

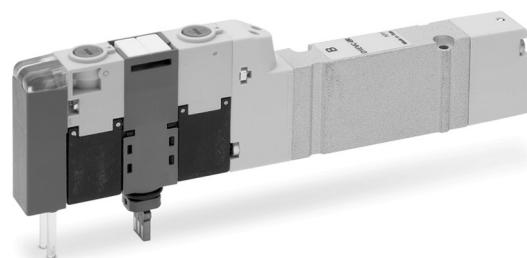
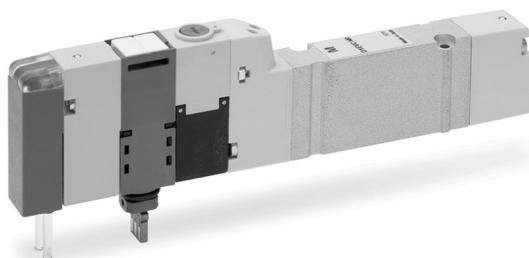
K = 5/3 CO



N = 5/3 CP

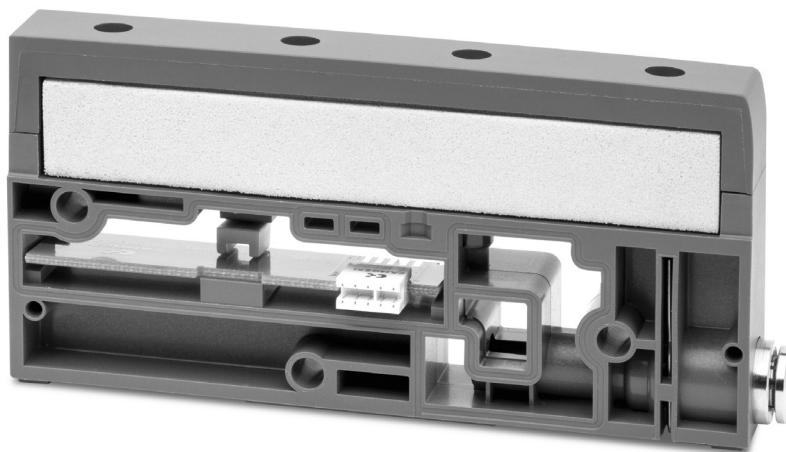


L = free position

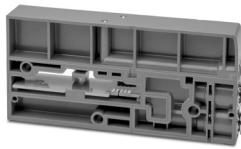


INTERMEDIATE SUBBASES CODING EXAMPLE

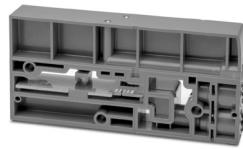
D	AM	1	S	-	QH	-	C
D	SERIES						
AM	ACCESSORIES AM = modular accessories						
1	SIZE: 1 = 10.5 mm						
S	COMPONENT: S = modular subbase						
QH	INTERMEDIATE DIAPHRAGM SUBBASE Q = diaphragm on channels 1, 3, 5 R = diaphragm on channel 1 S = diaphragm on channels 3, 5 DIAPHRAGM WITH EXTERNAL SERVO-PILOT SUPPLY QT = diaphragm on channels 1, 3, 5; 12/14 external RT = diaphragm on channels 1; 12/14 external ST = diaphragm on channels 3, 5; 12/14 external DIAPHRAGM WITH INTEGRATED SILENCER QH = diaphragm on channels 1, 3, 5 RH = diaphragm on channel 1 SH = diaphragm on channels 3, 5 SUBBASE FOR ADDITIONAL FLOW X = supply (1) and exhausts (3,5) XH = supply (1) and exhausts (3,5) with integrated silencer INTERFACE SUBBASE FOR ADDITIONAL FLOW WITH EXTERNAL SERVO-PILOT SUPPLY XT = additional supply (1) and exhausts (3, 5)						
C	VERSION: C = cartridge tube Ø8						



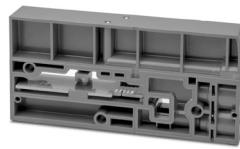
AVAILABLE FUNCTIONS – SUBBASE TYPES



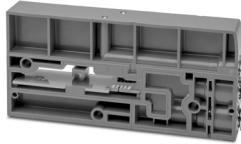
Q



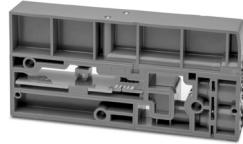
R



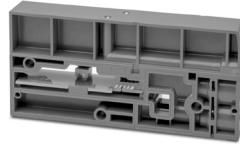
S



QT



RT



ST



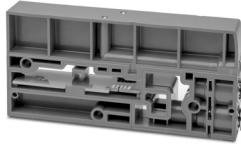
QH



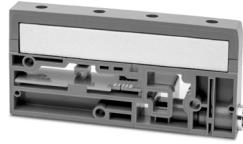
RH



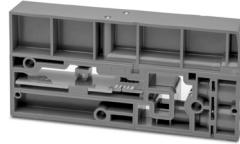
SH



X



XH



XT

Q = diaphragm on channels 1, 3, 5

R = diaphragm on channel 1

S = diaphragm on channels 3, 5

QT = diaphragm on channels with external supply 12/14

RT = diaphragm on channels with external supply 12/14

ST = diaphragm on channels with external supply 12/14

QH = diaphragm on channels 1, 3, 5 with integrated silencer

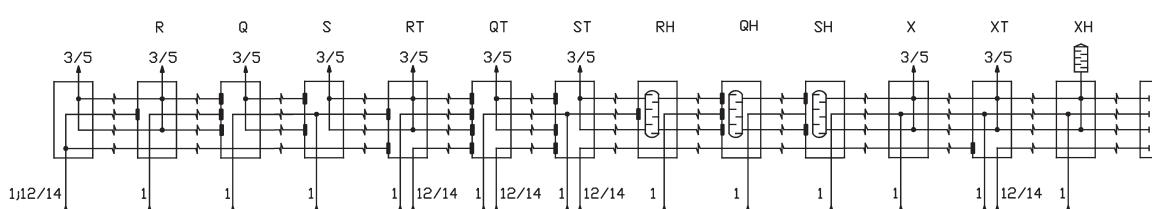
RH = diaphragm on channel 1 with integrated silencer

SH = diaphragm on channels 3, 5 with integrated silencer

X = additional supply channel 1 and exhaust channels 3, 5

XH = additional supply channel 1 and exhaust channels 3, 5 with integrated silencer

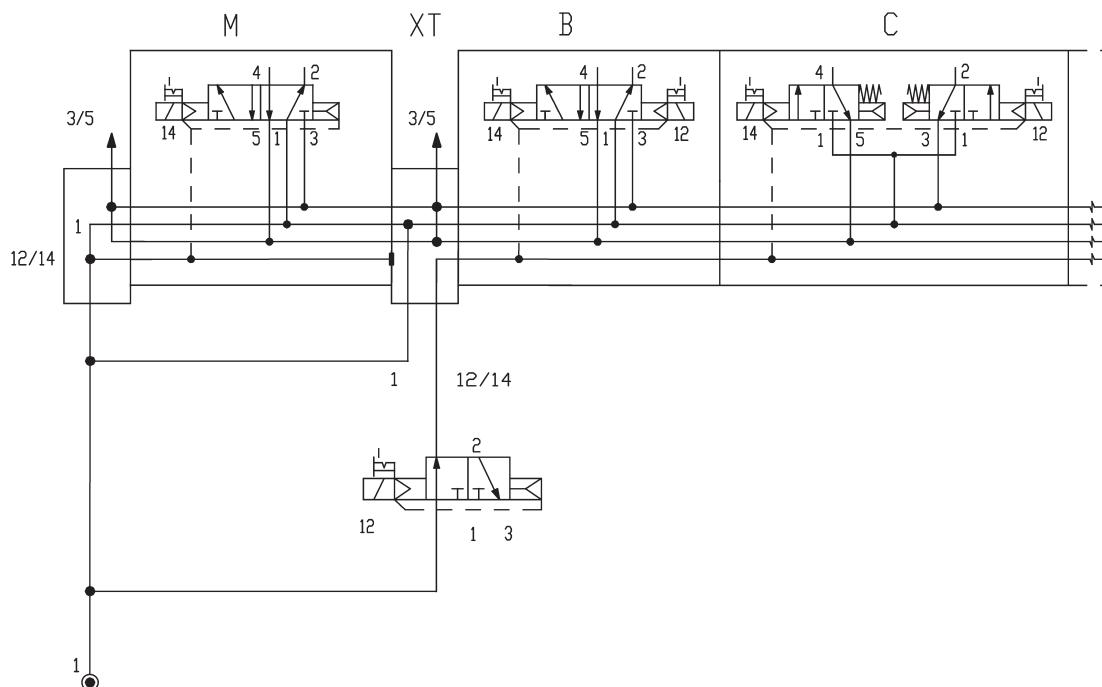
XT = additional supply channel 1, 12/14 and exhausts channels 3, 5



INTERMEDIATE SUBBASE FOR A SEPARATE SERVO-PILOT SUPPLY

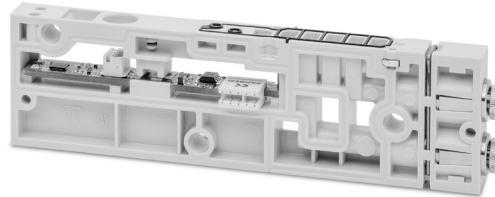
In order for the solenoid valves to operate, they need an electric signal and pressure on channel 12/14. This intermediate subbase, available with different diaphragm functions on channels 1 and 3/5, always has channel 12/14 closed, the solenoid valves assembled on the subbases in subsequent positions cannot operate if there is no pressure. In the example below the solenoid valve type M is pneumatically supplied on all channels, solenoid valve B is installed next to subbase XT, which has channel 12/14 closed. The solenoid valve 3/2 which is not part of the island, is always activated under regular operating conditions (as indicated in the image) enabling all solenoid valves to operate properly. In case of any problems, by removing the actuation of this solenoid valve, it is possible to interrupt the functioning of the subsequent positions.

In this condition, the 2x3/2 valves assume the rest position.



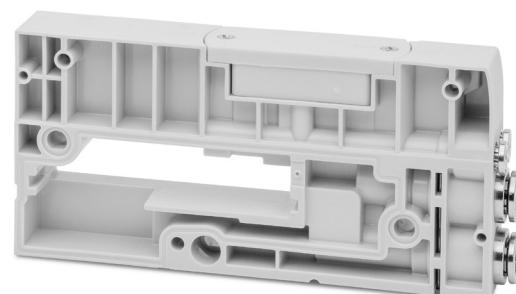
VALVE SUBBASES CODING EXAMPLE

D	AM	1	S	-	A	T
D	SERIES					
AM	ACCESSORIES AM = modular accessories					
1	SIZE 1 = 10,5 mm					
S	COMPONENT S = modular subbase					
A	TYPE OF CONNECTION T = subbase without cartridges		A = cartridges tube Ø 4		B = cartridges tube Ø 6	
T			T = with tie rods			



SUPPLY MODULE/SERVOPILOT CODING EXAMPLE

D	AM	1	0	-	KC
D	SERIES				
AM	ACCESSORIES AM = modular accessories				
1	SIZE 1 = 10,5 mm				
0	SERVO-PILOT SUPPLY 0 = internal / external				
KC	INITIAL PNEUMATIC TERMINAL PLATE KC = cartridge tube Ø8				



CODING EXAMPLE

D	AM	1	T	-	Q	0
D SERIES						
AM	ACCESSORIES AM = modular accessories					
1	SIZE 1 = 10,5 mm					
T	COMPONENT T = electrical terminal plate					
Q	TYPE OF TERMINAL PLATE M = multipole 25 pins Q = multipole 44 pins					
0	INTERFACE 0 = without interface W = WLAN					

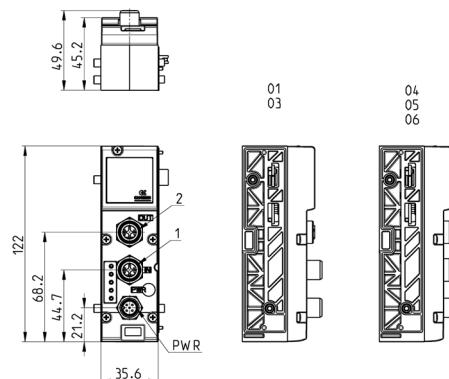
**CODING EXAMPLE**

D	AM	1	0	-	RT
D SERIES					
AM	ACCESSORIES AM = modular accessories				
1	SIZE 1 = 10,5 mm				
0	COMPONENTS 0 = Standard				
RT	TERMINAL PLATE RT = Right terminal				



Multi-serial modules; variants

Fieldbus protocols are very popular in pneumatic applications, thanks to their benefits in terms of reduced wiring, ease of maintenance, diagnostic possibilities and high number of I/O. The serial node for valve islands is available for the main communication protocols according to the table below.



Mod.	Fieldbus Protocol	1	2	Bus-IN connector	Bus-OUT connector
01	PROFIBUS	Bus-OUT	Bus-IN	M12 B 5-pin male	M12 B 5-pin female
03	CANopen	Bus-OUT	Bus-IN	M12 A 5-pin male	M12 A 5-pin female
04	EtherNet/IP	Bus-IN	Bus-OUT	M12 D 5-pin female	M12 D 5-pin female
05	EtherCAT	Bus-IN	Bus-OUT	M12 D 5-pin female	M12 D 5-pin female
06	PROFINET	Bus-IN	Bus-OUT	M12 D 5-pin female	M12 D 5-pin female

Digital input module Mod. ME4-0800-DC and ME4-1600-DT

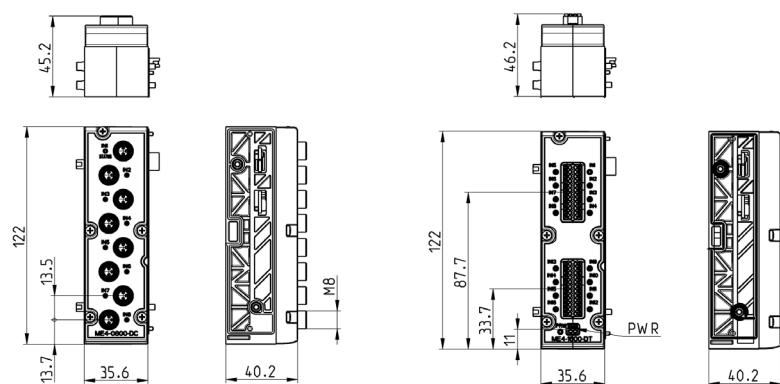
The Digital input module can be connected at the left of the Multi-serial module and can be placed in any order with other, both digital and analog Input/Output modules.

The module integrates diagnostic functions and is available in versions with:

- Eight M8 3-pin connectors.
- Terminal block (Push-in) for the connection of 16 inputs

In the terminal block version, power supply is normally provided by the valve island directly.

In case of loads exceeding 800mA, power supply is provided by an external power supply to be connected to a 2-pin terminal block connector (PWR)



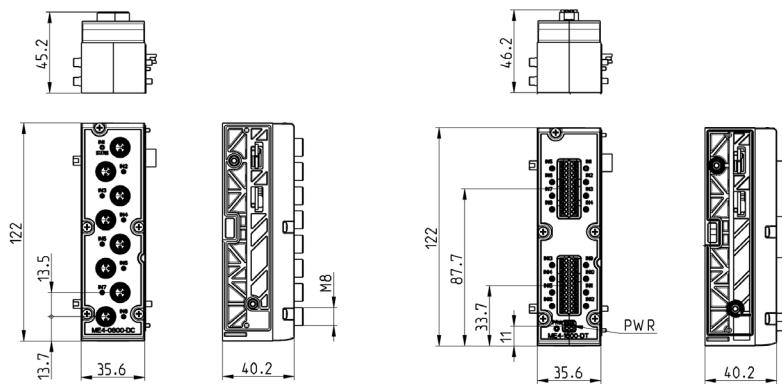
Mod.	Coding reference	Number of digital inputs	Connection	Number of connectors	Dimensions	Signalling	Sensor supply	Overvoltage protection	Absorption	Type of signal	Protection class	Operating temperature	Weight
ME4-0800-DC	A	8	M8 3 pin female	8	122 x 35.6 mm	8 yellow led 24 V DC 1 red led		400 mA for 4 sensors	10 mA	PNP	IP65	0 ÷ 50°C	110 g
ME4-1600-DT	B	16	Terminal block (push-in)	2 (+1)	122 x 35.6 mm	8 yellow led 24 V DC 1 red led	Internal: 800 mA for 16 sensors External: 2 A for 16 sensors		10 mA	PNP	IP20	0 ÷ 50°C	110 g

Digital power output module Mod. ME4-0004-DL and ME4-0016-DT

The digital output module can be connected only in presence of a CPU or Expansion module, at the left of the CPU module and can be placed in any order with other, both digital and analog Input/Output devices and with the initial module of the subnet. It is available in two versions:
 - eight M8 3-pin connectors
 - Terminal block (Push-in) for the connection of 16 outputs

For both versions, the outputs can be configured individually or as PNP or NPN through a software.

The 8 outputs M8 version can supply 24W and is directly supplied through the CPU node.
 The 16 outputs, terminal block version is supplied externally through a terminal block, 3-pin connector, providing 48W and a voltage supply of 6-32V to the outputs.
 The module is equipped with diagnostics (Status)



Mod.	Coding reference	N° of digital outputs	Connection	Number of connectors	Dimensions	Signalling	Supply outputs	Max power per module	Max power per digital output	Type of signal	Protection class	Operating temperature	Weight
ME4-0008-DL	Q	8	M8 3-pin female	8	122 x 35,6 mm	8 yellow led 1 red led	24 V DC	24 W	3 W	NPN/PNP	IP65	0 ÷ 50°C	100 g
ME4-0016-DT	R	16	Terminal block (Push-in)	2	122 x 35,6 mm	8 yellow led 1 red led	6-32 V DC	48 W	3 W	NPN/PNP	IP20	0 ÷ 50°C	100 g

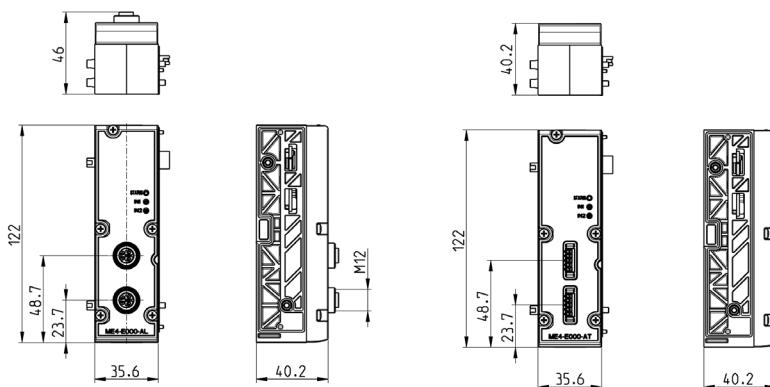
Analog input module Mod. ME4-****-AL and ME4-****-AT

The analog input module can be connected at the left of the CPU module and can be placed in any order with other Input/Output devices.

It is possible to configure every analog input as differential input 0-10V, ±10V, 0-20mA, 4-20mA, ±20mA with a resolution up to 16 bit.

External voltage of 24 V is available to supply the sensor connected (max 0,25A/channel). The output is protected against short-circuit.

The module is equipped with diagnostics (Status) and is available both in the version with two M12 (L) connectors with 5 contacts, as in terminal block version with Push-in spring connection (T).



Mod.	Coding reference	Number of analog inputs	Connection	Number of connectors	Dimension	Signalling	Sensor supply	Overvoltage protection	Absorption	Protection class	Operating temperature	Weight
ME4-C000-AL	C	2 (Config. 0-10V,±10V,0-20mA,4-20mA,±20mA)	M12 A 5-pin female	2	122 x 35,6 mm	2 yellow led 1 red led	24 V DC	500 mA shared between the two channels	max 20 mA	IP65	0 ÷ 50°C	110 g
ME4-C000-AT	D	2 (Config. 0-10V,±10V,0-20mA,4-20mA,±20mA)	Terminal block 5-pin (Push-in)	2	122 x 35,6 mm	2 yellow led 1 red led	24 V DC	500 mA shared between the two channels	max 20 mA	IP20	0 ÷ 50°C	110 g

Analog input module Mod. ME4-E000-A*, ME4-G000-A* and ME4-L000-A*

The analog input module can be connected at the left of the CPU module and can be placed in any order with other, both digital and analog Input/Output devices.

Analog, 2-channel Bridge module (ME4-E000-A*):

Sensor data acquisition module with Resistor Bridge-type (4-wire) output, like strain gauge, non isolated.

The module is able to process the two channel inputs with gain factor from 1mV/V to 255mV/V, with a resolution of up to 24bit.

Supply voltage of the sensor +5V (max 0,05A/channel). The output is protected against short-circuit.

Analog, 2-channel RTD module (ME4-G000-A*):

RTD Temperature sensor data acquisition module, in 2/3/4-wire configuration, non isolated.

The module is able to process the following sensor types:

PT100, PT200, PT500, PT1000, Ni100, Ni120, Ni1000, with a resolution of up to 16bit.

Typical measuring fields range from -200 ÷ +850 °C (PT sensors) and -60 ÷ +250 °C (Ni sensors)

Analog, 2-channel TC (thermocouples) module (ME4-L000-A*):

TC temperature sensor data acquisition module in 2-wire configuration, non isolated.

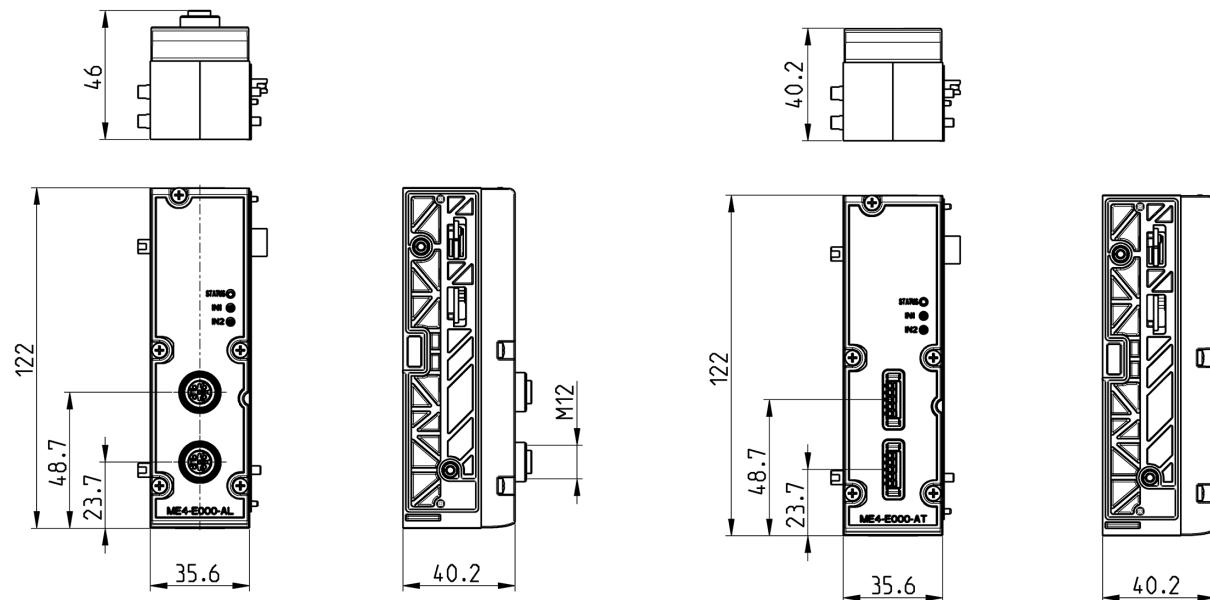
The module is able to process the following sensor types:

J, K, B, E, N, R, S, T, with a resolution of up to 16bit.

All modules are equipped with diagnostics (Status).

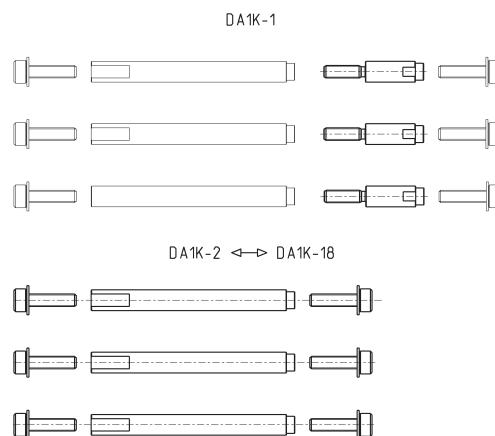
The characteristics of the single input can be configured by a software for all analog module types.

The modules are available both in the version with two M12 connectors (L) with 5 contacts, and in the version with spring terminal block, Push-in (T) connection.



Mod.	Coding reference	Numbers of analog inputs	Connection	Number of connectors	Dimension	Signalling	Absorption	Protection class	Operating temperature	Weight
ME4-E000-AL	E	2 M12 bridge inputs	M12 A 5-pin female	2	122 x 35,6 mm	2 yellow led 1 red led	max 20 mA	IP65	0 ÷ 50°C	110 g
ME4-E000-AT	F	2 bridge inputs with terminal block (Push-in)	Terminal block (Push-in) 5-pin	2	122 x 35,6 mm	2 yellow led 1 red led	max 20 mA	IP20	0 ÷ 50°C	110 g
ME4-G000-AL	G	2 RTD M12 inputs	M12 A 5-pin female	2	122 x 35,6 mm	2 yellow led 1 red led	max 20 mA	IP65	0 ÷ 50°C	110 g
ME4-G000-AT	H	2 RTD inputs with terminal block (Push-in)	Terminal block (Push-in) 5-pin	2	122 x 35,6 mm	2 yellow led 1 red led	max 20 mA	IP20	0 ÷ 50°C	110 g
ME4-L000-AL	L	2 TC M12 inputs	M12 A 5-pin female	2	122 x 35,6 mm	2 yellow led 1 red led	max 20 mA	IP65	0 ÷ 50°C	110 g
ME4-L000-AT	M	2 TC inputs with terminal block (Push-in)	Terminal block (Push-in) 5-pin	2	122 x 35,6 mm	2 yellow led 1 red led	max 20 mA	IP20	0 ÷ 50°C	110 g

Tie-rods for valve size 1



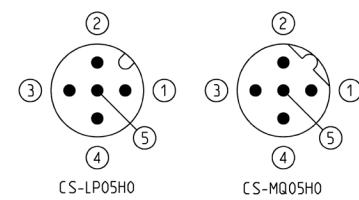
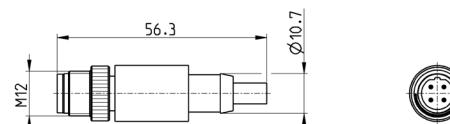
Mod.	Valve positions	NOTE
DA1K-2	2	*
DA1K-4	4	*
DA1K-6	6	*
DA1K-8	8	*
DA1K-10	10	*
DA1K-12	12	*
DA1K-14	14	*
DA1K-16	16	*
DA1K-18	18	*
DA1K-1	-	**

* Tie-rod.
The supply includes 3 tie-rods and 6 screws.

** Joint bolt for odd positions.
The supply includes 3 joint bolts.

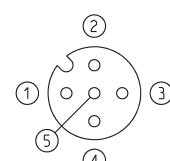
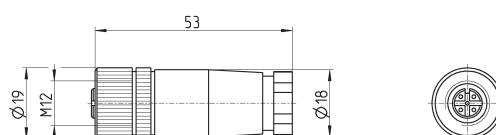
M12 male terminating resistor

For PROFIBUS, CANopen

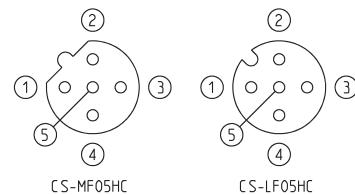
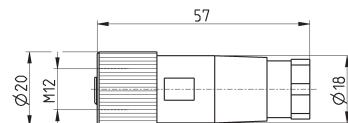


Mod.	description	type of connector	connection	Protocol
CS-MQ05HO	moulded terminating resistor	straight	M12 B 4 pin male - Pin 5 is not connected	PROFIBUS
CS-LP05HO	moulded terminating resistor	straight	M12 A 5 pin male - Pin 5 is connected	CANOpen

Straight connector for power supply

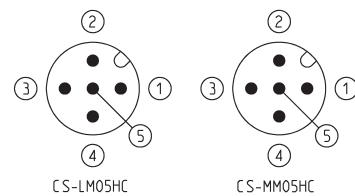
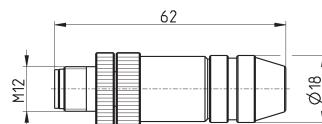


Mod.	description	type of connector	connection	cable length (m)
CS-LF04HB	for wiring	straight	M12 A 4 pin female - Pin 5 is not connected	-



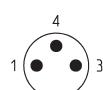
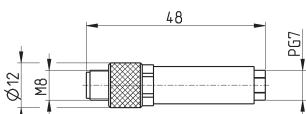
Mod.	description	type of connector	connection	Protocol
CS-LF05HC	for wiring	straight	M12 A 5 pin female	CANopen
CS-MF05HC	for wiring	straight	M12 B 5 pin female	PROFIBUS

Straight male M12 connectors for Bus-OUT



Mod.	description	type of connector	connection	Protocol
CS-LM05HC	for metal wiring	straight	M12 A 5 pin male	CANopen
CS-MM05HC	for metal wiring	straight	M12 B 5 pin male	PROFIBUS

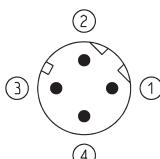
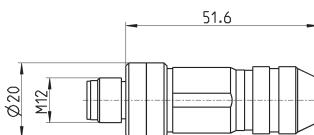
3 pin male M8 wiring connector for digital input modules



Mod.	description	type of connector	connection	cable length (m)
CS-DM03HB	for wiring	straight	M8 3 pin male	-

Male wiring connector for Bus-IN and Bus-OUT

For PROFINET, EtherCAT, EtherNet/IP



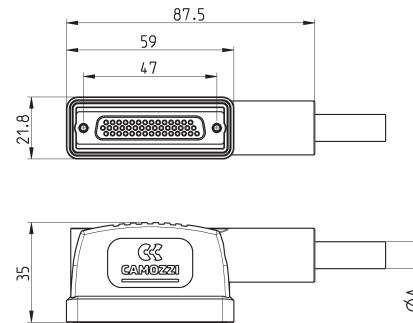
Mod.	description	type of connector	connection	cable length (m)
CS-SM04HO	for metal wiring	straight	M12 D 4 pin	-

Right angle Sub-D female connector 25-44 pins

Protection class IP65

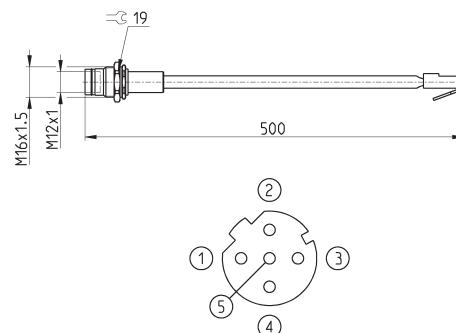


Mod.	ϕA	PIN	cable length (m)
G25X1-3	10	25	3
G25X1-5	10	25	5
G25X1-10	10	25	10
G25X1-15	10	25	15
G25X1-20	10	25	20
G25X1-25	10	25	25
G44X1-3	13	44	3
G44X1-5	13	44	5
G44X1-10	13	44	10
G44X1-15	13	44	15
G44X1-20	13	44	20
G44X1-25	13	44	25



Adaptor and panel mount for Ethernet RJ45 to M12 D networks

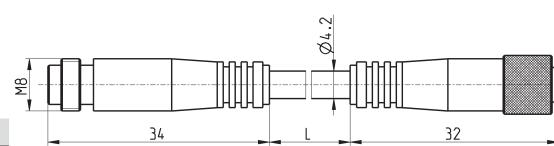
For PROFINET, EtherCAT, EtherNet/IP



Mod.	description	type of connector	connection	cable length (m)
CS-SE04HB-F050	moulded cable	straight	RJ45 male, M12 D 4 pin female - Pin 5 is not connected	0.5

Extension with M8 connector, 3 pin male / female

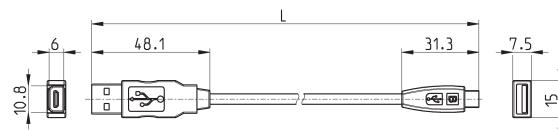
Non shielded

For the connection of the digital input modules
ME3-0008 and ME3-0004

Mod.	description	type of connector	connection	L [cable length] (m)
CS-DW03HB-C250	moulded cable	straight	M8 3 pin male / female	2.5
CS-DW03HB-C500	moulded cable	straight	M8 3 pin male / female	5



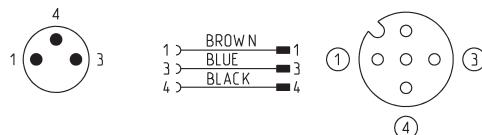
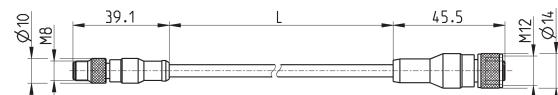
For the hardware configuration
of the Camozzi products



Mod.	description	connections	material for outer sheath	cable length "L" (m)
G11W-G12W-2	black shielded cable 28 AWG	standard USB to Micro USB	PVC	2

Adapter cable, M8 3-pin male - M12 4-pin female

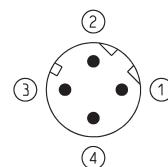
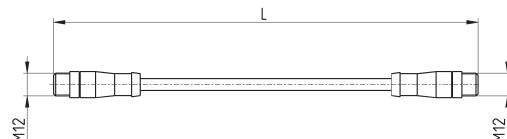
Protection class: IP69K



Mod.	description	max voltage	max current	Nr conn. wires	connections	outer sheath	cable "L" (m)
CS-AG03HB-C250	3-pin cable 24 AWG, high flexibility	50V AC / 60V DC	3 A	3	M8 3-pin male - M12 4-pin fem.	PUR black	2.5
CS-AG03HB-C500	3-pin cable 24 AWG, high flexibility	50V AC / 60V DC	3 A	3	M8 3-pin male - M12 4-pin fem.	PUR black	5

Cables with straight connectors

For PROFINET, EtherCAT, EtherNet/IP



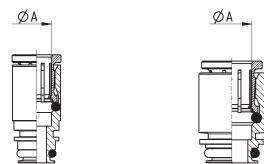
Mod.	description	type of connector	connection	L [cable length] (m)
CS-SB04HB-D100	moulded cable	straight	2x M12 D 4 pin male	1
CS-SB04HB-D500	moulded cable	straight	2x M12 D 4 pin male	5
CS-SB04HB-DA00	moulded cable	straight	2x M12 D 4 pin male	10
CS-SB04HB-DD00	moulded cable	straight	2x M12 D 4 pin male	15
CS-SB04HB-DG00	moulded cable	straight	2x M12 D 4 pin male	20
CS-SB04HB-DJ00	moulded cable	straight	2x M12 D 4 pin male	25

Interchangeable cartridges for subbases and terminal plates/diaphragms



TABLE LEGEND:

✗ = compatible with
VS = subbase version
VT = terminal plate/diaphragm version

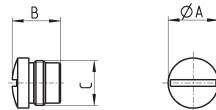


Mod.	øA	VS	VT
6700 4-D1	4	✗	
6700 6-D1	6	✗	
6700 8-D1	8		✗

M8 and M12 connector cover caps



For digital and analog input/output modules and subnet



Mod.	A	B	C [Connection]
CS-DFTP	10	11	M8
CS-LFTP	13.5	13	M12

Identification plates

The packaging contains
45 identification plates 9x5mm



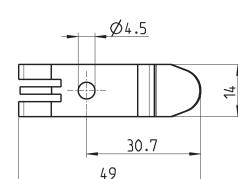
Mod.
HP1/E

Mounting brackets for DIN rail



DIN EN 50022 (mm 7,5 x 35 - width 1)

Supplied with:
2x plates
2x screws M4x6 UNI 5931



Mod.
PCF-E520